

WHAT IS CLAIMED IS:

1. A microchip controller board comprising:  
a programmable microchip controller;  
terminals for writing a program into said microchip controller;  
a circuit pattern having terminals for operating said microchip controller which are connected to shared terminals; and  
an operating circuit pattern for operating said microchip controller which is disconnected in a portion where a program writing is not obstructed.
2. The microchip controller board according to claim 1, wherein  
a gap of the disconnected portion of said operating circuit pattern is narrower than a width of said operating circuit pattern and an interval of said circuit pattern.
3. The microchip controller board according to claim 1 or 2, wherein  
the gap of the disconnected portion of said operating circuit pattern is 0.2 mm or less.
4. The microchip controller board according to any one of claims 1 to 3, wherein  
a shape of the disconnected portion of said operating circuit pattern is formed into circularity.
5. A manufacturing method for a microchip controller board including a programmable microchip controller, terminals for writing a program into said microchip controller, and a circuit pattern having terminals for operating said microchip controller which are connected to shared terminals, and an operating circuit pattern for operating said microchip controller that is disconnected in a portion where a program writing is not obstructed, comprising the steps of:  
mounting said non-programmed microchip controller on said board in a state in which said operating circuit pattern for operating said microchip controller is disconnected;  
programming said microchip controller with a programming tool from

the programming terminals of said microchip controller;  
removing thereafter said programming tool; and  
connecting the portion where said operating circuit pattern for  
operating said microchip controller is disconnected, thereby manufacturing  
said microchip controller board.

6. A manufacturing method for a microchip controller board including a  
program-rewritable microchip controller, terminals for writing a program into  
said microchip controller, and a circuit pattern having terminals for  
operating said microchip controller which are connected to shared terminals,  
and an operating circuit pattern for operating said microchip controller that  
is disconnected in a portion where the program writing is not obstructed,  
comprising the steps of:

writing a program into said microchip controller,  
connecting thereafter the portion where said operating circuit pattern  
is disconnected;

disconnecting once again said connected portion of said circuit pattern  
of the microchip controller board;

changing the program of said microchip controller by a programming  
tool from the programming terminal of said microchip controller;

removing thereafter said programming tool;

connecting the portion where said operating circuit pattern for  
operating said microchip controller is disconnected, thereby manufacturing  
said microchip controller board.